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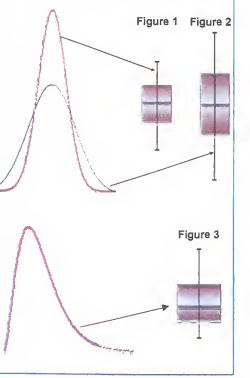
Distribution of Home Health Benefit Dollars 1996-1998

Along with Operation Restore Trust, the Balanced Budget Act of 1997 changed the incentives facing providers of home health services in the Medicare program. The proportion of Medicare enrollees that received home health services dropped, and use of services among those who received home health benefits fell as well. This is the second of three issues of MCBS Profiles that use the 1996 and 1998 Access to Care files to examine those change for "community beneficiaries" -- respondents not in a nursing home when the fall round of the survey was conducted.

In the previous issue of MCBS Profiles, we discussed changes in the user rate for home health benefits— the proportion of enrollees who received services— between 1996 and 1998. We noted that there was an overall decline in the user rate, and that this was especially marked for beneficiaries aged 85 and older, for people with one or more limitations in activities of daily living (ADLs), for people with two or more chronic conditions, and for people who had suffered stroke or who had urinary incontinence.

In addition to user rates, the distribution of home health program spending among those enrollees who used the home health benefit changed between 1996 and 1998. To summarize these changes visually, we use a type of graph called a "box and whisker" chart. In this type of chart, five key numbers are shown for a distribution: the median (which separates the top half of users from the bottom half), the 25th percentile (which separates the bottom quarter of users from the others), the 75th percentile (which separates the top quarter of users from the others), and the 5th and 95th percentiles. The median is shown in the chart as a horizontal line, and the 25th and 75th percentile values make the top and bottom edge of a box; note that this box defines the dollar range within which half of users fell. The 5th and 95th percentile values are connected to the box by "whiskers."

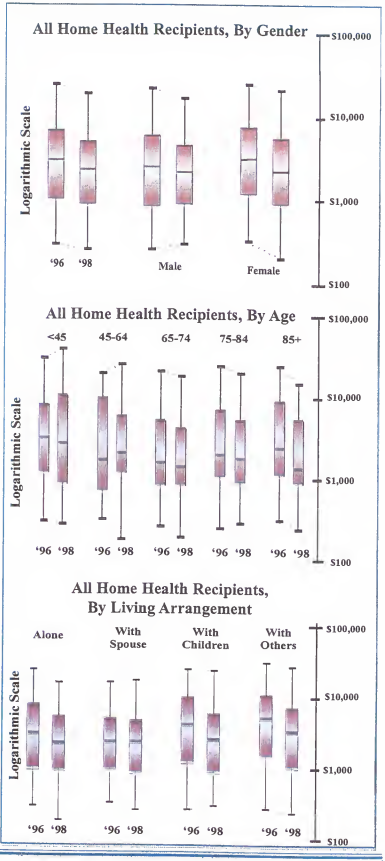
Examples of Spending Distributions and Their Box-and-Whisker Plots



The shape of the box and whiskers conveys information about the distribution itself. For example, a distribution where users are all clustered together will have a very small box compared with one with more variation in the amount spent (see Figures 1 and 2). Similarly, a distribution with "outliers" at the expensive end will have a longer top whisker than bottom whisker (see Figure 3). The relative position of the box and whiskers tells how two different distributions compare to each other.

The box and whisker charts of Medicare home health benefits for 1996 and 1998 show an overall drop in the distribution of spending, despite price inflation from 1996 to 1998. The top whisker and 75th percentile each fell proportionately more than the 25th percentile or bottom whisker, suggesting that the upper "tail" of spending was being cut back more than the lower tail: that is, there were relatively fewer beneficiaries with higher spending, a pattern that was repeated among most different classifications of beneficiaries. (By compressing the scale, a logarithmic plot helps the reader to visualize these changes more clearly.) Looking at the distribution of spending for men in 1998 compared to 1996, we see that it was more concentrated – the median dropped a little, but both the lowest users and the highest users converged on the median. For women, the shape of the distribution in 1996 and in 1998 were very similar, but the whole 1998 distribution shifted down (less reimbursement) compared to 1996.

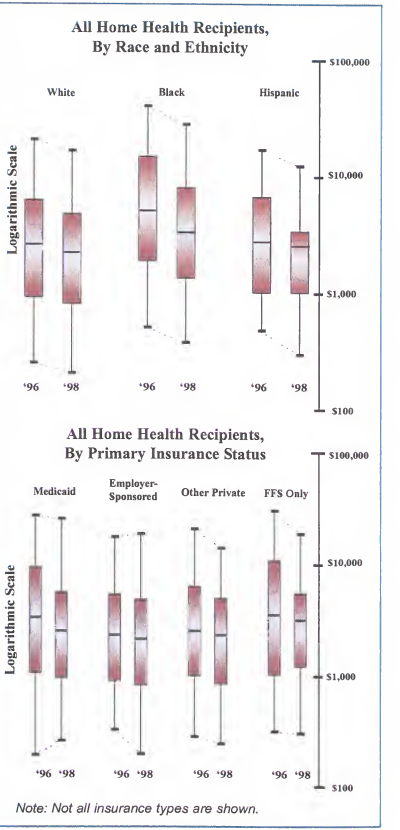
The changes in distribution of spending varied among the various age cohorts of beneficiaries. For those under age 45, the distribution widened; for those aged 45 to 64 years, the distribution condensed while the tails spread out. For beneficiaries aged 85 years and older, fewer large spending figures were recorded in 1998 than in 1996, pushing down the median spending level.



In 1998, there were fewer large spending amounts for beneficiaries who lived alone, with children, or with others, while the distribution of spending for beneficiaries living with their spouse was essentially unchanged.

A similar pattern existed for beneficiaries of different races and ethnicity. The overall distribution of spending for White beneficiaries was fairly unchanged (although the overall user rate fell from 1996 to 1998). There were fewer large spending amounts for Black and Hispanic beneficiaries; spending for the latter group also clustered more closely around the median.

The spending distribution changed significantly for people who had no supplementary form of insurance. A relatively sharp reduction in the number of large benefit amounts was accompanied by an overall clustering closer to the median for this group, while beneficiaries with various types of supplemental coverage experienced less changes in the distribution of spending. (The exception: There were fewer large spending figures among people with Medicaid coverage.)



Note: Not all insurance types are shown.

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